

**Department of Environmental Quality Notice of Bacteria TMDL Modification of Lower Mattaponi, Lower Pamunkey, and Upper York Rivers in King William, New Kent, and King and Queen Counties and the Town of West Point**

The Department of Environmental Quality (DEQ) seeks public comment from interested persons on 25 proposed modifications of the Total Maximum Daily Loads (TMDLs) developed for impaired segments of the Lower Mattaponi River (VAP-F25E-01), Lower Pamunkey River (VAP-F14E-03), and the Upper York River (VAP-F26E-05 and VAP-F26E-20). The TMDL was approved by the Environmental Protection Agency on 07/28/2010 and is available at:

<http://www.deq.virginia.gov/portals/0/DEQ/Water/TMDL/apptmdls/yorkrvr/yorkpamunkmatta.pdf>. To view the proposed revised TMDL pages and the modification letter to EPA explaining each intended modification along with page numbers modified, please visit:

<http://www.deq.virginia.gov/Programs/Water/WaterQualityInformationTMDLs/TMDL/TMDLDevelopment/DocumentationforSelectTMDLs.aspx>. The proposed modifications were first public noticed this past August and a minimum 30-day public comment period was observed. DEQ has provided an additional public comment opportunity from Oct. 8 through Friday Nov. 9<sup>th</sup>, 2012 to allow interested persons additional time to comment and review proposed TMDL modifications.

Changes 1-5 are with regard to the Lower Mattaponi River Enterococci TMDL segment (VAP-F25E-01). (1) A Single Family Home - General Permit (VAG404212) discharges  $\leq 1000$  gallons per day (GPD) to a non-tidal tributary of the Lower Pamunkey River, called Un-named Tributary (UT) to Olsson's Pond, was mistakenly given a waste load allocation (WLA) based on 60 GPD (or 0.00006 million gallons per day (MGD)) in the Lower Mattaponi River Enterococci (recreational use) TMDL. The facility should have been allocated in the Lower Pamunkey River Enterococci TMDL. DEQ proposes to correct the Lower Mattaponi TMDL by removing the waste load allocation for Enterococci. This load will be moved to future growth and may be used by future permittees in this segment. The details regarding the re-allocation of the WLA for this permittee within the Lower Pamunkey segment and how the facility will maintain compliance with the Lower Pamunkey River TMDL are noted in the section below. (2) The Hampton Roads Sanitation District (HRSD) West Point Sewage Treatment Plant (STP) (VA0075434) is a VPDES minor municipal plant with a design flow of 0.60 million gallons per day (MGD) which discharges to the Lower Mattaponi River. The WLA in the TMDL was based on the Single Sample Instantaneous Maximum standard of 104 (cfu/100mL) Enterococci, when it should have been based on the Geometric Mean (GM) standard of 35 (cfu/100mL) Enterococci. The geometric mean standard is the appropriate standard and results in a smaller WLA for Enterococci for the facility. DEQ proposes to correct the Lower Mattaponi River Enterococci TMDL by revising the facility's WLA to accommodate this facility at a maximum design flow of 0.60 MGD and an Enterococci GM standard of 35 cfu/100mL. (3) The

original Future Growth amount was equal to five times the load of municipal discharger HRSD West Point (VA0075434), based on the Single Sample Instantaneous Maximum Standard of 104 cfu/100mL Enterococci. This was equal to 0.01% of the TMDL, which is inadequate to address potential future permitting needs of this segment. DEQ proposes to increase the Future Growth value to 0.76% of the TMDL. (4) The revisions noted in 1-3 above, result in an increase in the Total WLA and a decrease in the Load Allocation (LA) values. (5) Finally, DEQ has added tables within the TMDL document to reflect both the Annual and Daily WLA, LA, and TMDL values for the Lower Mattaponi River Enterococci TMDL. In summary, the changes noted above were necessary to correct TMDL development errors, address insufficient future growth values for future permitting needs, and to express the loadings in both annual and daily values as required by EPA.

Changes 6-11 are with regard to the Lower Pamunkey River Enterococci TMDL segment (*VAP-F14E-03*). (6) A Single Family Home - General Permit (VAG404212) discharges  $\leq 1000$  gallons per day (GPD) to a non-tidal tributary of the Lower Pamunkey River, Un-named Tributary (UT) to Olssen's Pond. This permit was mistakenly given a waste load allocation (WLA) based on 60 GPD (or 0.00006 million gallons per day (MGD)) in the Lower Mattaponi River Enterococci (recreational use) TMDL, but should have been allocated in the Lower Pamunkey River Enterococci TMDL. DEQ proposes to allocate a WLA for this facility in the Lower Pamunkey Enterococci TMDL. This is a facility which uses chlorination in a contact tank, followed by dechlorination, meets Virginia's Single Family Home - General Permit limits for discharges to non-tidal freshwater, and the facility outfall is located more than 2.75 miles upstream of the Enterococci impairment on the Lower Pamunkey River mainstem. Compliance of this facility with the WLA for Enterococci will be met through compliance with existing *E. coli* permit limit protections. Compliance of this facility with the existing permit limits will neither cause nor contribute to the downstream Enterococci bacteria impairment in the Lower Pamunkey River. (7) Parham Landing Waste Water Treatment Plant (WWTP) (VA0088331) is a VPDES major municipal plant with a design flow of 2 MGD. However, the WLA in the Lower Pamunkey River Enterococci TMDL was based on the Single Sample Instantaneous Maximum standard of 104 (cfu/100mL) Enterococci, when it should have been based on the Geometric Mean (GM) standard of 35 (cfu/100mL) Enterococci. The WLA was also allocated at the incorrect design flow of 0.568 MGD. DEQ proposes to revise the Lower Pamunkey Enterococci TMDL by correcting the facility's WLA to accommodate this facility at a maximum design flow of 2 MGD and an Enterococci GM standard of 35 cfu/100mL. While the geometric mean standard reduced the WLA, the correct design flow of the facility increased it; however, DEQ believes compliance of this facility with the existing permit limit will neither cause nor contribute to the Enterococci bacteria impairment in the Lower Pamunkey River. (8) The Rock-Tenn West Point Mill (VA0003115) is a VPDES major industrial facility with a design flow of 23 MGD which discharges to the Lower Pamunkey River. This facility was recently identified as a source of bacteria in the Lower Pamunkey River and should receive an

allocation in the Enterococci TMDL. DEQ proposes to correct the Lower Pamunkey River Enterococci TMDL by allocating a WLA to accommodate this facility at a maximum design flow of 23 MGD and the Enterococci GM standard of 35 cfu/100mL. This facility's permit is currently under permit review, will include a limit based on the Enterococci geometric mean standard (35 cfu/100ml) and is expected to be public noticed and reissued later this year. The permit will include a compliance schedule to ensure the bacteria limits for Enterococci are met. Compliance of this facility with the Enterococci permit limit will neither cause nor contribute to the impairment in the Lower Pamunkey River. (9) The original Future Growth allocated was equal to five times the load of the municipal discharger, Parham Landing WWTP (VA0088331) at the Single Sample Instantaneous Maximum standard of 104 cfu/100mL Enterococci. This is equal to 0.01% of the TMDL, which is inadequate to address potential future permitting needs of this segment. DEQ proposes to increase the Future Growth to 0.74% of the TMDL. (10) The revisions noted in 6-9 above, result in an increase in the Total WLA and a decrease in the Load Allocation (LA) values. (11) Finally, DEQ has added tables within the TMDL document to reflect both the Annual and Daily WLA, LA, and TMDL values for the Lower Pamunkey River Enterococci TMDL.

In summary, the changes noted above were necessary to correct TMDL development errors, include a WLA for a newly identified bacteria source, address insufficient future growth values for future permitting needs, and to express the loadings in both annual and daily values as required by EPA.

Changes 12-18 are with regard to the Upper York River Enterococci TMDL segment (*VAP-F26E-05*). (12) A Single Family Home - General Permit (VAG404212) discharges  $\leq 1000$  gallons per day (GPD) to a non-tidal tributary of the Lower Pamunkey River, Un-named Tributary (UT) to Olsson's Pond. This facility should have received a WLA in the Upper York River segment in order to account for incoming load because sources in the Lower Pamunkey River Enterococci TMDL were used as inputs in the Upper York Enterococci TMDL development. DEQ proposes to allocate a WLA for this facility in the Upper York Enterococci TMDL, based on the Geometric Mean (GM) (35 cfu/100ml) standard. This is a facility which uses chlorination in a contact tank, followed by dechlorination, meets Virginia's Single Family Home - General Permit limits for discharges to non-tidal freshwater, and the facility outfall is greater than 5 miles upstream of the Upper York River Enterococci impairment. Compliance of this facility with the daily WLA for Enterococci will be met through compliance with existing *E. coli* permit limit protections. Compliance of this facility with the existing permit limits will neither cause nor contribute to the downstream Enterococci bacteria impairment in the Upper York River. (13) The HRSD West Point STP (VA0075434) is a VPDES minor municipal plant with a design flow of 0.60 million gallons per day (MGD) which discharges to the Lower Mattaponi River. The WLA in the TMDL was based on the Single Sample Instantaneous Maximum standard of 104 (cfu/100mL) Enterococci, when it should have been based on the Geometric Mean (GM) standard of 35 (cfu/100mL) Enterococci. The geometric mean standard is the appropriate standard and results in a smaller WLA for Enterococci for the facility. DEQ

proposes to correct the Upper York River Enterococci TMDL by revising the facility's WLA to accommodate this facility at a maximum design flow of 0.60 MGD and the Enterococci GM standard of 35 cfu/100mL. Compliance of this facility with the existing permit limits will neither cause nor contribute to the downstream Enterococci bacteria impairment in the Upper York River. (14) Parham Landing WWTP (VA0088331) is a VPDES major municipal plant with a design flow of 2 MGD. However, the facility's WLA in the Upper York River Enterococci TMDL was based on the Single Sample Instantaneous Maximum standard of 104 (cfu/100mL) Enterococci, when it should have been based on the Geometric Mean (GM) standard of 35 (cfu/100mL) Enterococci. The WLA was also allocated at the incorrect design flow of 0.568 MGD. DEQ proposes to correct the Upper York River Enterococci TMDL by revising the facility's WLA to accommodate this facility at a maximum design flow of 2 MGD and the Enterococci GM standard of 35 cfu/100mL. While the geometric mean standard reduced the WLA, the correct design flow of the facility increased it; however, DEQ believes compliance of this facility with the existing permit limit will neither cause nor contribute to the Enterococci bacteria impairment in the Upper York River. (15) The Rock-Tenn West Point Mill (VA0003115) is a VPDES major industrial facility with a design flow of 23 MGD which discharges to the Lower Pamunkey River. This facility was recently identified as a source of bacteria in the Lower Pamunkey River and should receive a WLA in the Upper York segment to account for the incoming load because sources in the Lower Pamunkey River Enterococci TMDL were used as inputs in the Upper York Enterococci TMDL development. DEQ proposes to revise the Upper York Enterococci TMDL by allocating a WLA to accommodate this facility at a maximum design flow of 23 MGD and the Enterococci GM standard of 35 cfu/100mL. This facility's permit is currently under permit review, will include a limit based on the Enterococci geometric mean standard (35 cfu/100ml) and is expected to be public noticed and reissued later this year. The permit will include a compliance schedule to ensure the bacteria limits for Enterococci are met. Compliance of this facility with the Enterococci permit limit will neither cause nor contribute to the impairment in the Upper York River. (16) The original Future Growth allocated was equal to the sum of five times the load of the municipal dischargers HRSD West Point STP (VA0075434) and Parham Landing WWTP (VA0088331) at the Single Sample Instantaneous Maximum standard of 104 cfu/100mL Enterococci, equal to 0.01% of the TMDL, which is inadequate to address potential future permitting needs of this segment. DEQ proposes to increase the Future Growth to 0.75% of the TMDL. (17) The revisions noted in 12-16 above, result in an increase in the Total WLA and a decrease in the Load Allocation (LA) values. (18) Finally, DEQ has added tables within the TMDL document to reflect both the Annual and Daily WLA, LA, and TMDL values for the Upper York River Enterococci TMDL.

In summary, the changes noted above were necessary to correct TMDL development errors, include a WLA for a newly identified bacteria source, address insufficient future growth values for future permitting needs, and to express the loadings in both annual and daily values as required by EPA.

Changes 19-25 are with regard to the Upper York River Fecal Coliform TMDL segment (VAP-F26E-20). (19) A Single Family Home - General Permit (VAG404212) discharges  $\leq 1000$  gallons per day (GPD) to a non-tidal tributary of the Lower Pamunkey River, Un-named Tributary (UT) to Olsson's Pond. The facility received a WLA in the Upper York River Fecal Coliform (shellfish) TMDL based on the 90<sup>th</sup> Percentile Fecal Coliform Standard of 49 Most Probable Number (MPN) per 100mL when it should have been based on a 200 MPN/100mL, which is the concentration used to model protective areas below dischargers to shellfish growing areas by the Virginia Department of Health. The WLA was also based on the incorrect design flow of the facility 60 GPD (or 0.00006 million gallons per day (MGD)). DEQ proposes to correct the Upper York River Fecal Coliform TMDL by revising the WLA at a design flow of 1000 GPD and a Fecal Coliform concentration of 200 MPN/100mL. This is a facility which uses chlorination in a contact tank, followed by dechlorination, meets Virginia's Single Family Home - General Permit limits for discharges to non-tidal freshwater, and the facility outfall is greater than 5 miles upstream of the Upper York River Fecal Coliform impairment. Compliance of this facility with the WLA for Fecal Coliform will be met through compliance with existing *E. coli* permit limit protections. Compliance of this facility with the existing permit limits will neither cause nor contribute to the downstream Fecal Coliform impairment in the Upper York River. (20) The HRSD West Point STP (VA0075434) is a VPDES minor municipal plant with a design flow of 0.60 million gallons per day (MGD) which discharges to the Lower Mattaponi River. The facility should have received a WLA for Fecal Coliform based on 200 MPN/100mL, which is the concentration used to model protective areas below dischargers to shellfish growing areas by the Virginia Department of Health. DEQ proposes to correct the Upper York River Fecal Coliform TMDL by allocating a WLA to accommodate this facility at a maximum design flow of 0.60 MGD and a Fecal Coliform concentration of 200 MPN/100mL. Compliance of this facility with the existing permit limits for fecal coliform will neither cause nor contribute to the downstream Fecal Coliform impairment in the Upper York River. (21) Parham Landing WWTP (VA0088331) is a VPDES major municipal plant with a design flow of 2 MGD which discharges to the Lower Pamunkey River. The facility should have received a WLA for Fecal Coliform based on 200 MPN/100mL, which is the concentration used to model protective areas below dischargers to shellfish growing areas by the Virginia Department of Health. DEQ proposes to correct the Upper York River Fecal Coliform TMDL by allocating a WLA to accommodate this facility at a maximum design flow of 2 MGD and a Fecal Coliform concentration of 200 MPN/100mL. The facility has an existing permit limit for Enterococci to meet the current Water Quality Standard for recreational use. Due to the protectiveness of the Enterococci discharge limits and the outfall location, which is over 5.5 miles upstream of the Upper York River shellfish impairment for Fecal Coliform, compliance of this facility with the Upper York Fecal Coliform WLA will be met through the existing Enterococci permit limit protections. Compliance of this facility with the existing permit limits will neither cause nor contribute to the downstream Fecal Coliform bacteria impairment in the Upper York River. (22) The Rock-Tenn West Point Mill (VA0003115) is a VPDES major industrial facility with a design flow of 23 MGD which discharges to the

Lower Pamunkey River. This facility was recently identified as a source of bacteria in the Lower Pamunkey River segment and should receive a WLA in the Upper York Fecal Coliform (shellfish) TMDL, as bacteria sources in the Lower Pamunkey River Enterococci TMDL were used as inputs in the Upper York Fecal Coliform (shellfish) TMDL development. DEQ proposes to revise the Upper York Fecal Coliform TMDL by allocating a WLA to accommodate this facility at a maximum design flow of 23 MGD and a Fecal Coliform concentration of 200 MPN/100mL. The facility's effluent is categorized as a non-sewage discharge containing Enterococci. The facility is receiving a WLA for Enterococci in both the Lower Pamunkey and Upper York Enterococci TMDLs (noted in above sections). Wood-pulp facilities have historically had an issue of false-positive results when analyzed for Fecal Coliform. Due to the nature of the discharge and protectiveness of the Enterococci discharge limits, and, given that the outfall is located over 1 mile upstream of the Upper York shellfish impairment for fecal coliform, compliance of this facility with the Upper York Fecal Coliform WLA will be met through the existing Enterococci permit limit protections. This facility's permit is currently under permit review, will include a limit based on the Enterococci geometric mean standard (35 cfu/100ml) and is expected to be public noticed and reissued later this year. The permit will include a compliance schedule to ensure the bacteria limits for Enterococci are met. Compliance of this facility with the existing permit limits is not expected to cause or contribute to the downstream Fecal Coliform bacteria impairment in the Upper York River. (23) The original Future Growth allocated was equal to 1% of the TMDL. DEQ proposes to increase the daily Future Growth to 1.6% of the TMDL, which will more adequately address potential future permitting needs of this segment. (24) The revisions noted in 19-23 above, result in an increase in the Total WLA and a decrease in the Load Allocation (LA) values. (25) Finally, DEQ has added tables within the TMDL document to reflect both the Annual and Daily WLA, LA, and TMDL values for the Upper York River Fecal Coliform (shellfish) TMDL.

In summary, the changes noted above were necessary to correct TMDL development errors, include a WLA for a newly identified bacteria source, address insufficient future growth values for future permitting needs, and to express the loadings in both annual and daily values as required by EPA.

The changes noted above to the Lower Mattaponi Enterococci, Lower Pamunkey Enterococci, York Enterococci and shellfish TMDLs are less than <1%, respectively for each TMDL and will neither cause nor contribute to the non-attainment of each impaired segment. The public comment period for these modifications will end on Friday November 9, 2012. Please send comments to Margaret Smigo, Department of Environmental Quality, Piedmont Regional Office, 4969-A Cox Road, Glen Allen, Virginia 23060, by email at [Margaret.Smigo@deq.virginia.gov](mailto:Margaret.Smigo@deq.virginia.gov), or by fax (Attn. Margaret Smigo) at (804)527-5106. Following the comment period, a modification letter and comments received will be sent to EPA for final approval. If you would like to request a copy of the full proposed TMDL modification, please see the link (second link in first paragraph) or contact Margaret Smigo.